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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,526	09/05/2003	Kevin I. Bertness	C382.12-0163	9523
27367	7590	03/10/2006		
WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1400 - INTERNATIONAL CENTRE 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			EXAMINER TERESINSKI, JOHN	
			ART UNIT	PAPER NUMBER
			2858	

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/656,526	<b>Applicant(s)</b> BERTNESS, KEVIN I.	
	<b>Examiner</b> John Teresinski	<b>Art Unit</b> 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 December 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-24, 27-34 and 36-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-24, 27-34 and 36-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-24, 27-34 and 36-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,811,979 to Rhein in view of U.S. Patent No. 6,331,762 to Bertness.

Regarding claim 36, Rhein discloses a method and device for determining cable resistance including coupling a first Kelvin (Fig. 3, see elements V3, 16) connection to a first side of a load (22) and a second connection to a second side (14) of the load (22),

coupling a voltage sensor to the first side of a dc source (26),

measuring a first parameter of the electrical system between a first Kelvin connection and a second Kelvin connection to the electrical system (column 5 lines 26-27);

measuring a second parameter of the electrical system between the voltage sensor and the second Kelvin connection to the electrical system (column 5 lines 28-30); and

a processor configured to determine cable resistance of wiring of the electrical system between the second Kelvin connection and the first Kelvin connection as a function of the first parameter and the second parameter (column 5 lines 40-43). Rhein does not disclose a battery.

Bertness discloses an electrical battery tester (Fig. 1) wherein first and second Kelvin connectors (36A, 36B) are coupled to first and second sides of the battery (18) and a load (14), including a voltage sensor and a shunt resistance/current sensor (26). It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to include a battery into Rhein as taught by Bertness for the purpose of providing a reliable cable testing apparatus suitable for use in vehicles in order to prevent damage to vehicle electrical systems.

Regarding claim 38, Rhein does not disclose a use in a vehicle.

Bertness disclose an energy management and monitor system for a battery of an automotive vehicle (column lines 22-25) with first and second Kelvin connectors (36A, 36B) are coupled to first and second sides of the battery (18) and a load (14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a use in a vehicle into Rhein as taught by Bertness for the purpose of providing a reliable cable testing apparatus suitable for use in vehicles in order to prevent damage to vehicle electrical systems.

Regarding claims 19 and 37, Rhein disclose providing multiple circuits for providing multiple parameters sensed as a function of other parameters (column 5 lines 34-45).

Regarding claims 20, 21, 38 and 39, Rhein discloses the first and second parameters are dynamic and measured in response to a forcing function (column 4 lines 51-61).

Regarding claims 22, 23, 40 and 41, Rhein discloses the forcing function comprises an active forcing function and wherein the forcing function comprises passive forcing function (column 4 lines 51-67).

Regarding claim 24, Rhein discloses including Kelvin connectors to the electrical system (column 5 line 15).

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Regarding claims 27, 28, 42 and 43, Rhein discloses determining electrical resistance in accordance to the equation as claimed (column 5 lines 15-18) and applying a forcing function to the C and D points (Fig. 1, points 14 and 16).

Regarding claims 30-32 and 45-47, Rhein discloses an output configured to provide an output/ an output to an operator/ an output to electrical circuitry related to the cable resistance of the wiring (column 5 lines 55-67, column 6 lines 1-3).

Regarding claims 33 and 48, Rhein discloses a pass/fail output (column 6 lines 1-3).

Regarding claims 34 and 49, Rhein discloses output is indicative of a voltage drop for a particular current through the electrical system (column 5 lines 55-67).

Regarding claims 29 and 44, Rhein does not disclose measurements indicative of a cold cracking amp measurement. Bertness discloses measurements indicative of a cold cracking amp measurement (column 6 lines 32-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include measurements indicative of a cold cracking amp measurement as taught by Bertness into Rhein for the purpose of providing a more accurate battery testing means.

### ***Response to Arguments***

Applicant's arguments filed December 23, 2005 have been fully considered but they are not persuasive.

In response to applicant's arguments, the recitation "for determining cable resistance of wiring of an electrical system of a vehicle (claims 1 and 38) has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any

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patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to applicants argument that there is simply no hint or suggestion to use the teachings of Rhein in a vehicle, the examiner disagrees. Applicant is referred to Rhein (column 5 lines 10-51) which teaches determining cable resistance of wiring of the electrical system between the second Kelvin connection and the first Kelvin connection as a function of first parameter and the second parameters with the kelvin connections connected to a voltage source/measurement circuitry. Simply substituting a battery as the voltage source in claim 36 or using a battery in a vehicle would be obvious to one of ordinary skill in the art. Bertness (column 1 lines 47-60) clearly shows that Kelvin measurements could be performed through kelvin connections to a vehicle battery.

In response to applicants argument that the cited combination teaches measuring load resistance and not resistances of cables, the examiner disagrees. Applicant is referred to Rhein (column 5 lines 40-43), which clearly teaches calculating the resistance of a test cable.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Teresinski whose telephone number is (571) 272-2235. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J1  
JT  
March 1, 2006

  
ANJAN DEB  
PRIMARY EXAMINER